

Remarks/Arguments

In the July 3, 2007 office action, the Examiner rejected Claims 1-14. Applicant has amended Claims 1-14 to better clarify the invention and added new claims 15-23. No new matter has been added. Claims 1-23 are now pending of which Claims 1, 4, 7 and 12 are independent claims. Applicant respectfully requests reconsideration and allowance of the present application in view of the amendments and following remarks.

Amendments to the Specification

Applicant has proof read the patent application and has corrected some typographical errors without adding any new matter. Entry of the changes to the specification is respectfully requested.

Claim Objections

The Examiner objects to the use of terms BB_SCs, BB_Ser and R_RDYs in Claims 1-14, as being undefined. Applicant has amended Claims 1-14 and the terms are now only used in Claim 14, 17, 20 and 21. The terms are now defined in these claims and are also defined in paragraphs [0046], [0047] and [0059]. Applicant respectfully requests withdrawal of this objection.

Rejections Under 35 U.S.C. § 102

Claims 1-14 are rejected under 35 USC 102(e) as being anticipated by Lu et al (US Patent No. 6,785,281) (hereinafter referred to as “Lu”). Applicant overcomes the rejection as follows.

Claim 1:

An anticipation rejection under § 102 requires that “every element of the claimed invention must be identically shown in a single reference.” *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990). “There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.” *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991).

Lu fails to disclose all the elements of amended Claim 1. In particular, Lu fails to disclose, “a method for credit recovery due to lost frames in an in-line credit extender coupled between a remote device and a local device, where the in-line credit extender extends credit for the local device, comprising: determining credit loss due to lost frames by comparing a frame count value with a primitive count value for a receive segment of the in-line credit extender, the primitive count value being maintained in a buffer to buffer credit recovery module of the in-line segment, the buffer to buffer credit recovery module interfacing with the receive segment of the in-line extender that receives frames and primitives from the remote device and a transmit segment of the in-line extender that transmits frames and primitives to the remote device, wherein the primitive is sent periodically by the remote device after certain number of frames are transmitted by the remote device to the local device via the in-line extender; storing the credit loss in a buffer at the buffer-to-buffer credit recovery module in the in-line extender; increasing a

transmit frame count based on the credit loss, the transmit frame count is maintained for frames that are transmitted by the in-line extender to the local device and the transmit frame count is maintained by a counter in the buffer to buffer recovery module; and sending the primitive to the local device if the transmit frame count after adding the credit loss matches a primitive count maintained for the transmit segment of the in-line extender by the buffer-to-buffer recovery module". (Amended Claim 1).

It is an object of Lu, "to manage transmission to a remote buffer such that the buffer is fully utilized by maintaining a sense of the availability of buffer space even when responses (acknowledgement) signals are not received by the sender". (Lu, Col. 2, lines 29-32). Lu does not disclose the use of an in-line credit extender that is used for extending credit for a local device. Because Lu does not disclose a credit extender, it fails to disclose a method used by the in-line credit extender as articulated in amended Claim 1.

In Section 3, Page 2-3 of the Office Action, the Examiner relies on various segments of Lu to reject the various elements of Claim 1. The referenced sections are individually addressed below with respect to the amended Claim 1:

(a) Col. 6, lines 6-16: The Examiner cites Col. 6, lines 6-16 of Lu to reject a first programmed counter value. Col. 6, lines 6-16 describes how a receiver credit is lost based on RS-CNT 202 values before a "re-synchronization period" and after a "re-synchronization period". This is different from amended Claim 1 based on at least the following: First, RS-CNT 202 counts R_RDys and Claim 1 is for credit recovery due to lost frames and not lost R_RDys. Second, Counter 202 is located at a sender (see Lu, Figure 2 and Col. 5, line 43-46). The equivalent of a sender in amended Claim 1 is the "remote device". The remote device of amended Claim 1 does not perform credit recovery using counters, but instead credit recovery is

managed by a buffer-to buffer credit recovery module of the credit extender. Third, while in Lu, the synchronization is triggered and managed by counters located at the sender (or the remote device), in amended Claim 1, the remote device does not control or manage synchronization and instead the counters and the buffer to buffer credit recovery module is located at the in-line credit extender.

(b) Col. 5, lines 1-5 and Col. 6, lines 51-55 (Note SOFA): The Examiner relies on Col. 5, lines 1-5 and Col 6, line 51-55 (Note: SOFA) to reject BB-SCs that are received. Col 5, lines 1-5 mentions the use of two new special characters (SOFA and R_DYA) during a re-synchronization period. Col. 6, lines 51-55 discussed the use of two types of packets A and B during a re-synchronization period for a specified interval of time. (See also, Col. 6, lines 36-38). This again is different from amended Claim 1, because the in-line credit extender does not use a “specified” re-synchronization time interval. In amended Claim 1, a standard primitive is received by the credit extender that uses the buffer to buffer recovery module for credit recovery.

(c) Col. 6, line 20: The Examiner used Col. 6, line 20 to reject the element “loading the difference between the counter values”. Col. 6, line 20-21 states: “BB_CREDIT_CNT_252 is 2 at the end of the re-synchronization period”. The BB_CREDIT_CNT 252 is maintained by the sender, in contrast, in amended Claim 1, all the counters are in the buffer to buffer credit recovery module of the in-line credit extender, which is not disclosed by Lu.

(d) Col. 6, line 6-8: Col. 6, line 6-8 mention that “prior to the start of the synchronization period, four frames are in the receiver buffer”. This does not mean that the difference between a programmed counter value and the received frame count are stored in a buffer of buffer to buffer credit recovery module of an in-line credit extender, as articulated by amended Claim 1.

(e) Col. 6, lines 6-9: See (d) above.

(f) Col. 6, line 20-24: Col. 6, lines 20-24 states “BB_CREDIT_CNT 252 is 2 at the end of the re-synchronization period. At this point the sender can lower BB_CREDIT_CNT 252 by one, to account for the lost receiver credit, making a BB_CREDIT_CNT 253 value of 1, which is the correct value 254.” As discussed above, in Lu, the BB-CREDIT_CNT 252 is maintained by a remote device. In amended Claim 1, the remote device is simply sending a primitive, and the buffer to buffer credit recovery module of the in-line credit extender manages all the credit recovery operations.

(g) Col. 6, line 30-32: Col. 6, lines 30-32 states that “As an example, the sender could send one SOFA to signal the receiver to send a pre-determined number of R-RDYAs.” Once again, the sender in Lu is requesting the “pre-determined” number of R-RDYs because the sender attempts to perform the re-synchronization. In amended Claim 1, the in-line credit extender manages credit recovery by communicating with a local device that communicates with a remote device (the sender of Lu).

Lu’s methods and systems are driven by a sender and not by an in-line credit extender of amended Claim 1, because Lu does not disclose the credit extender. Based on at least the foregoing reasons, amended Claim 1 is patentable over Lu. Applicant respectfully request withdrawal of the rejection under 35 USC §102.

Claims 2-14:

Claims 2-3 depend from Claim 1 and are patentable over Lu for at least the reasons given above with respect to Claim 1.

Claims 4-6 is a system claim with limitations similar to Claim 1, and hence are patentable over Lu based on at least the reasons given above with respect to Claim 1.

Claims 7-14 are patentable over Lu for at least the reasons given above with respect to Claim 1.

Based on at least the foregoing reasons, Claims 2-14 are patentable over Lu. Applicant respectfully requests that the rejections under 35 USC §102 be withdrawn.

New claims 15-23:

New claims 15-23 are also patentable over Lu for at least the reasons given above with respect to Claim 1.

Conclusion

For the foregoing reasons, Applicant believes Claims 1-23 are allowable, and a notice of allowance is respectfully requested. If the Examiner has any questions regarding the application, the Examiner is invited to call the undersigned Attorney at (949)-955-1920.

Respectfully submitted,

Dated: 12/3/07

By: Richa Dhindsa
Richa Dhindsa (#L0275)
On behalf of Tejinder Singh
Attorney for the Applicant
Registration No. 39,535

Klein, O'Neill & Singh, LLP (Customer No.: 22145)
43 Corporate Park, Suite 204
Irvine, CA 92606
Tel: (949) 955-1920
Fax: (949) 955 1921
Docket No.: QN1062.US